

2/3 022

UNCLASSIFIED

PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0103222

ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. THE HETERODIENE CONDENSATION OF 5, DLENOPHILES GIVING UNSTABLE ADDUCTS, AND ISOMERIZATION OF THESE ADDUCTS TO SUBSTITUTED 3, HYDROXY PYRIDINES. THUS, ET BETA, ACETYLACRYLATE (I) REACTS WITH 4, METHYL, 5, ETHOXYOXAZOLE (III) TO GIVE 2, METHYL, 3, HYDROXY, 4, ACETYL, 5, CARBETHOXYPYRIDINE (III) THROUGH THE UNSTABLE ADDUCT .IIA. THIS MECHANISM IS SUPPORTED BY PI ELECTROV DENSITY CALCNS. FOR I AND II, ACTUAL ISOLATION OF III AS THEIR MAIN REACTION PRODUCT, ITS CHEM. CONVERSION, AND FINALLY BY PMA AND IR STUDIES. REACTIONS BETWEEN II AND BETA, ACETYLACRYLIC ACID (GIVING 2, METHYL, 3, HYDROXY, 5, ACETYL PYRIDINE) (IV), AND BETWEEN I AND CYCLOPENTEN, 3, ONE (FORMING 5, METHYL, 4, HYDROXY, 6, AZAHYDRINDEN, 3, ONE) (V) ALSO VERIFIED THIS TYPE OF MECHANISM.. THUS, TO A SOLN. OF 17.9 G I IN 20 ML ABS. ET SUB2 O WAS ADDED 8.87 G II, 1 ML ACOH, AND 200 MG HYDROQUINONE, AND THE SOLN. KEPT 1 WEEK AT ROOM TEMP. IN THE DARK TO GIVE 8 G III, M. 151-20DEGREES (HEPTANE). A SOLN. OF 2.5 G II AND 3.42 G BETA, ACETYLACRYLIC ACID IN 40 ML ABS. ET SUB2 O WAS KEPT 5 DAYS UNDER A CACL SUP2 TUBE TO GIVE 0.64 G IV, M. 253-4DEGREES (DECOMP.) (MEOH). TO A SUSPENSION OF 1.14 G LIALH SUB4 IN 50 ML THF WAS ADDED DROPHISE WITH COOLING 2.1 G III IN 50 ML THF, AND THE MIXT. REFLUXED 6 HR AND LEFT OVERNIGHT AT ROOM TEMP. TO GIVE 1.74 G 2, METHYL, 3, HYDROXY, 4, (ALPHA, HYDROXYETHYL), 5, HYDROXYMETHYL PYRIDINE, M. 172-3DEGREES (ETOH-ET SUB2 O).

UNCLASSIFIED

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CIRC ACCESSION NO--AP0103222
ABSTRACT/EXTRACT--A MOXT. OF 0.8 G CYCLOPENTEN, 3,ONE, 0.63 G II, AND 0.1 G
PYROGALLOL WAS HEATED 2 HR AT 110DEGREES, COOLED, TREATED WITH 1 ML
25PERCENT DRY HCL IN ETOH, CAREFULLY SHAKEN WITH 70 ML ABS. ET SUB2 O,
AND LEFT OVERNIGHT IN A REFRIGERATOR TO GIVE 0.22 G V, N. LARGER THAN
170DEGREES (ETOH-ET SUB2 O).

UNCLASSIFIED

PROCESSING DATE--020CT770

UNCLASSIFIED

Power

USSR

SAPOZHNIKOV, F. V., TURCHIN, N. Ya.

UDC 621.311.22

"The Development of Heat and Power Engineering Construction -- A Basic Trend in Creating an Energy Base for Electrification of the Country"

V sb. Energ. str-vo (Power Engineering Construction--Collection of Works), No 4 (106), Moscow, 1970, pp 26-30 (from RZh-Teploenergetika, No 9, Sep 70, Abstract No 9G4)

Translation: In recent years, a start has been made in the Soviet Union on construction of thermal electric power plants rated at 4,000 MW and more. Such power plants are to be built in regions of inexpensive coal deposits in Siberia (the Irkut Region), Kazakhstan (the Ekibastuz Region), in Central Asia (the Syrdar'ia State Regional Electric Power Plant), in the Donbass and on the Volga. Industrialization of the construction of thermal electric power plants is seen as an important achievement of the last decade. Two illustrations.

1/1

USSR

TURCHIN, V. F.

"Description of Analytic Transforms Using Recurrent Relationships within the Framework of REFAL"

Vychisl. Mat. i Vychisl. Tekhn. [Computer Mathematics and Computer Technology -- Collection of Works], No 3, Khar'kov, 1972, pp 38-41 (Translated from Referativnyy Zhurnal Kibernetika, No 6, 1973, Abstract No 6V648, by the author).

Translation: The general principles of construction of a hardware system for analytic computations using REFAL are presented.

1/1

USSR

UDC: 8.74

TURCHIN, V. F.

"Programming in REFAL Language. III. Programming in Basis REFAL"

Programmirovaniye na yazyke REFAL. III. Programmirovaniye na bazisnom
REFALe. In-t prikl. mat. AN SSSR. Preprint No 44 (cf. English above. Institute of Applied Mathematics, Academy of Sciences of the USSR. Preprint No 44), Moscow, 1971, 53 pp, ill. Mimeo. (from RZh-Kibernetika, No 1, Jan 72, Abstract No 1V995 K)

[No abstract]

1/1

- 37 -

USSR

UDC: 8.74

TURCHIN, V. F.

"Programming in REFAL Language. I. Informal Introduction to Programming
in the REFAL Language"

Programmirovaniye na yazyke REFAL. I. Neformal'noye vvedenie v program-
mirovaniye na yazyke REFAL. In-t Prikl. mat. AN SSSR. Preprint No 41
(cf. English above. Institute of Applied Mathematics, Academy of Sciences
of the USSR. Preprint No 41), Moscow, 1971, 55 pp, ill. Mimeo. (from
RZh-Kibernetika, No. 1, Jan 72, Abstract No 1V993 K)

[No abstract]

1/1

- 36 -

USSR

UDC: 8.74

TURCHIN, V. F.

"Programming in REFAL Language. IV. Use of Recursion Variables in the
REFAL Language"

Programmirovaniye na yazyke REFAL. IV. Ispol'zovaniye rekursivnykh pere-
mennykh v yazyke REFAL. Tr.-t prikl. mat. AN SSSR. Preprint No 43 (cf.
English above. Institute of Applied Mathematics, Academy of Sciences of
the USSR. Preprint No 48), Moscow, 1971, 47 pp, ill. Mimeo. (from RZh-
-Kibernetika, No 1, Jan 72, Abstract No 1V996 K)

[No abstract]

1/1

USSR

UDC: 8.74

TURCHIN, V. F.

"Programming in REFAL Language. II. Formal Description and Principles of Realization of REFAL"

Programmirovaniye na yazyke REFAL. II. Formal'noye opisaniiye i printsipy realizatsii REFALa. In-t Prikl. mat. AN SSSR. Preprint No 43 (cf English above. Institute of Applied Mathematics, Academy of Sciences of the USSR. Preprint No 43), Moscow, 1971, 60 pp, ill, Mimeo. (from RZh-Kibernetika, No 1, Jan 72, Abstract No 1V994 K)

[No abstract]

1/1

USSR

UDC: 8.74

TURCHIN, V. F.

"Equivalent Transforms of Recursive Functions Described in REFAL"

Teoriya Yazykov i Metody Postroyeniya Sistem Programmir. [The Theory of Languages and Methods of Construction of Programming Systems--Collection of Works], Kiev-Alushta, 1972, pp 31-42 (Translated from Referativnyy Zhurnal Kibernetika, No 11, 1972, Abstract No 11V537, by V. Mikheyev)

Translation: The basic theorems and rules of equivalent transforms of recursive functions in limited REFAL are formulated without proof. Limited REFAL is produced from full REFAL by: 1) elimination of exchange signals and related capability to change the state of a memory field in REFAL memory during the process of its operation; 2) elimination of free term variables; 3) elimination of recursive variables; 4) forbidding the use of open and repeated expression variables. An example of an equivalent transform is presented.

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USSR

UDC 621.396.677:525.164

DUGIN, N.A., TURCHIN, V.I., TSEYTLIN, N.M., SHARONOV, G.A.

"On The Use Of A Two-Element Interferometer With Fixed Base For Obtaining A Knife-Edge Directivity Diagram"

Radiotekh. i elektronika (Radio Engineering And Electronics), 1971, 16, No 6, pp 918-928 (from RZh--Radiotekhnika, No 9, Sept 1971, Abstract No 9817)

Translation: The singularities are considered of the synthesis of the linear antenna of a two-element interferometer with a fixed base during rotation of the earth. The conditions during which such synthesis can take place are obtained. The possible directional diagrams for such a system are calculated and certain requirements placed on the receiving apparatus of the interferometer are determined. 7 ill. 8 ref. Author's abstract.

1/1

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USSR

UDC: 621.936.677.012.12

DUGIN, N. A., TURCHIN, V. I., TSEYTLIN, N. M., SHARONOV, G. A.

"On Using a Two-Element Interferometer With Fixed Base to Produce a Knife Radiation Pattern"

Moscow, Radiotekhnika i Elektronika, Vol. 16, No 6, Jun 71, pp 918-928

Abstract: The authors consider some peculiarities and parameters of an equivalent antenna with a "knife" radiation pattern synthesized from a two-element interferometer with a base which remains fixed as the earth rotates for the case of observation of sources with "optimum" inclinations. Some requirements of the main parameters of the receiver are considered -- the width of the passband, selection of the time constant, use of a phase shifter, phase stability. The results of the analysis show that when observational data are appropriately processed, the proposed two-antenna interferometer system can give a "finger" radiation pattern with low side-lobe level at the expense of reduced sensitivity.

1/1

USSR

UDC 621.396.677.4.012.12

DUGIN, N. A., TURCHIN, V. I., SHARONOV, G. A.

"On the Radiation Pattern of Ring Antenna Arrays"

Moscow, Radiotekhnika i Elektronika, Vol 16, No 7, Jul 71, pp 1152-1157

Abstract: The authors examine radiation patterns of synthesized equidistant and nonequidistant antenna arrays with different numbers of rings realized by aperture synthesis utilizing the rotation of the earth. The results of computer calculations are presented for radiation patterns of arrays with different configurations and numbers of rings, as well as the corresponding radiation patterns obtained by the method of optical modeling. It is noted that the method of aperture synthesis utilizing the rotation of the earth (supersynthesis) has the advantage over conventional methods of multielement synthesis that wider variation of distribution is possible with respect to the synthesized aperture, which means that a more detailed study can be made of the distribution of radio brightness with respect to sources. In conclusion the authors thank N. M. Tseytlin for constructive criticism and constant interest in the work.

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- 7 -

I/2 018

UNCLASSIFIED

PROCESSING DATE--02OCT70
-U-

TITLE--EXPOSURE OF DISLOCATIONS IN NIUBIUM CARBIDE

AUTHOR--(021)-TURCHIN, V.N., RYMASHEVSKIY, G.A.

COUNTRY OF INFO--USSR

SOURCE--KRISTALLOGRAFIYA 1970, 15(1), 193-4

DATE PUBLISHED----70

SUBJECT AREAS--PHYSICS, ELECTRONICS AND ELECTRICAL ENGR.

TOPIC TAGS--CRYSTAL LATTICE DISLOCATION, ETCHED CRYSTAL, MODEL, CRYSTAL
LATTICE STRUCTURE, NIUBIUM CARBIDE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1989/0767

CIRC ACCESSION NO--AP0107309

STEP NO--UR/0070/70/015/001/0193/0194

UNCLASSIFIED

2/2 018

UNCLASSIFIED

PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0107309

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. PITS AND DISLOCATION LOOPS WERE EXPOSED BY ETCHING NBC UNDER THE FOLLOWING CONDITIONS: (1) WITH A MIXT. OF HNO₃ SUB3 PLUS HF (HNO₃ SUB3 10 PLUS HF 3 ML) FOR 30-60 SEC AT 20DEGREES, AND (2) ELECTROLYTICALLY IN A MIXT. OF H₂ SUB2 SO₄ SUB4 PLUS HF PLUS HNO₃ SUB3 (H₂ SUB2 SO₄ SUB4 50 PLUS HF 10 PLUS HNO₃ SUB3 20 ML) AT 30 V AND 0.8-1.0 A-MM PRIME2, FOLLOWED BY ETCHING AS IN (1). THE ETCH PITS FORM CHARACTERISTIC SUB₂ BOUNDARIES, D. 10 PRIME4 CM PRIME NEGATIVE2. BY ETCHING THE PITS (100), INCLUSIONS AND FRESH DISLOCATIONS ARE EXPOSED. THE DISLOCATION D. AT THE BRANCH OF THE 3 FOLD JUNCTION SHOWS A MORE COMPLEX CONSTRUCTION OF THE SUB BOUNDARY IN RELATION TO THE SIMPLE INCLINED BOUNDARY MODEL.

UNCLASSIFIED

USSR

UDC 576.851.214 (enterococcus).083.31

TURCHINSKY, I. N., Rublevo Water Works, Scientific Research Institute of Hygiene imeni Erisman, Moscow

"A Solid Culture Medium for Quantitative Enterococcus Determination in Water With Membrane Filters"

Moscow, Laboratornoye Delo, No 3, 1972, pp 183-185

Abstract: Available Enterococcus culture media require 48 hours for results and are readily colonized by bacteria. The proposed medium, producing results in 22-24 hours, consists of nutrient agar, glucose, monobasic and dibasic potassium phosphate, nitrammonium phosphate, and a yeast preparation as nutrients and growth inducers, 2,3,5-triphenyltetrazolium chloride to bring out the reducing ability of Str. faecalis, medical bile as a nonintestinal microbe inhibitor, polymyxin as a gram-negative bacteria inhibitor, and methyl blue as an inhibitor of gram-positive bacteria, the lower flora, and most aerobes. Both Str. faecalis and its variants, and Str. fascium grow identically well in it. Incidental Sarcina colonies are small and easily identified. Incidental bacteria appear on the filters after 24 hours. Small Str. spp. colonies should be used for identification since excessive growth weakens manifestation of reducing ability. Tests comparing this and the available media proved it to be more effective. 1/1

- 10 -

172 012
TITLE--THE CHEMICAL METHOD OF SPECIFIC DEGRADATION OF RNA WITH SELECTIVELY
REMOVED BASES. 3.FISSION OF PHOSPHOESTER BOND IN RIBOSE,2, AND
UNCLASSIFIED PROCESSING DATE--23 OCT 70
AUTHOR--{051}-TURCHINSKIY, M.F., GUSKOVA, L.I., KHAZAI, I.K., BUDOVSKIY,
E.I., KOCHETKOV, N.R.
COUNTRY OF INFO--USSR
SOURCE--MOLEKULYARNAYA BIOLOGIYA, 1970, VOL 4, NR 3, PP 428-434
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES, CHEMISTRY
TOPIC TAGS--RNA, CHEMICAL DECOMPOSITION, AMINE DERIVATIVE, AMINE CATALYST

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1998/0187

CIRC ACCESSION NO--AP0120885

UNCLASSIFIED

STEP NO--UR10463/70/004/003/0428/0434

2/2 012

CIRC ACCESSION NO--AP0120885

UNCLASSIFIED

PROCESSING DATE--23OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AMINE CATALYZED FISSION WAS STUDIED OF THE PHOSPHOESTER BOND IN RIBOSE,2(3), PHOSPHATE, THE COMPOUND MODELLING INTERNUCLEOTIDE LINKAGE IN RNA WITH REMOVED BASE. IT WAS SHOWN THAT RIBOSE,3,PHOSPHATE WITH PHOSPHOESTER BOND IN BETA POSITION OF THE GLYCOSIDE CENTER WAS ONLY SPLIT IN THE PRESENCE OF THE PRIMARY AMINES. THE ABILITY OF AMINES INVESTIGATED TO CATALYZE THE CLEAVAGE OF THIS BOND DECREASES IN A SEQUENCE: P,ANISIDINE IS GREATER THAN OR EQUAL TO ANILINE APPROXIMATELY 0,AMINOBENZOIC ACID GREATER THAN BENZYLAMINE APPROXIMATELY EQUAL TO LYSINE GREATER THAN ETHYLENEDIAMINE GREATER THAN P,AMINO BENZOIC ACID APPROXIMATELY EQUAL TO SULPHANYLIC ACID GREATER THAN BETA ALANINE APPROXIMATELY EQUAL TO METHYLAMINE. IN THE PRESENCE OF P,ANISIDINE UNDER MILD CONDITIONS (PH 5.30DEGREES, 5 HRS) THE RAPID SPECIFIC FISSION OF THE PHOSPHOESTER BOND OCCURS BOTH IN RIBOSE,3,PHOSPHATE AND IN DEURIDYLIC RNA. PHENYLHYDRAZINE CAUSES RAPID SPLITTING OF RIBOSE,2,PHOSPHATE BUT NOT OF RIBOSE,3,PHOSPHATE. FACILITY: INSTITUTE OF CHEMISTRY OF NATURAL PRODUCTS, ACADEMY OF SCIENCES, USSR, MOSCOW.

UNCLASSIFIED

USSR

UDC 621.039.53

KUROLENKIN, Ye. I., BURDAKOV, N. S., VIRGIL'YEV, Yu. S., OSTROVSKIY, V. S.
TURDAKOV, V. N., CHURILOV, Yu. S.

"Influence of Oxidation on Strength Properties of Graphite"

Atomnaya Energiya, Vol 32, No 4, Apr 72, p 312.

Abstract: This short article studies the influence of the degree of oxidation on compressive strength and on volumetric weight, characterized by porosity, for two commercial types of structural graphite, types GMZ and MPG. Studies were performed using cylindrical graphite specimens, 8 mm in diameter and 80 mm long, which were oxidized in an electric furnace in air at 700°C. The degree of oxidation was determined by weight loss of the specimen. It was found that at a 600-800°C oxidation temperature, the drop in volumetric weight occurs primarily in the surface layer. This agrees with the two-stage mechanism of oxidation of graphite, showing that in this temperature interval the process is intermediate between kinetic and diffusion processes. Graphs are presented showing the change in compressive strength and volumetric weight of the graphite with degree of oxidation.

1/1

USSR

UDC 547.944.6

TURDIKULOV, KH., YUSUNOV, M. K., SADYKOV, A. S., Tashkent Order of the Red Banner of Labor State University imeni V. I. Lenin

"Structure of the K-13 Alkaloid from Colchicum Kesselringii"

Tashkent, Khimiya Prirodykh Soyedineniy, No 4, 1972, pp 502-505

Abstract: A previous report was published on the separation of alkaloids from the bulbo-tubers *Colchicum kesselringii* Rgl. (Kh. Turdikulov, et al., KhPS, 541, 1971). A study has been made of the unknown phenol substance with R_f 0.31 called K-13 alkaloid. It belongs to the series of photochemical isomers of tropolonic alkaloids. The K-13 composition is $C_{21}H_{23}O_6N$. It has a melting point of 287-288°, $[\alpha]_D^{25}$ -420°. The ultraviolet, infrared, nuclear magnetic resonance and mass spectral data indicate the presence and the location of the corresponding functional groups. Beginning with the negative specific rotation, it is concluded that the K-13 alkaloid belongs to sis-trans - isomers which is confirmed by methylation in γ -lumicolchicine. The position of the hydroxyl group on the C₂ of the K-13 alkaloid was determined on the basis of the nuclear magnetic resonance spectrum and by comparison with known compounds of similar structure.

USSR

Alkaloids

UDC 547.944.6

TURDIKULOV, Kh., YUSUPOV, M. K., and SADYKOV, A. S., Order of
the Red Banner of Labor Tashkent State University im. V. I.
Lenin

"Desacetylcolchicin and Desacetylcolchicine -- the New Alka-
loids Isolated from Merendera Robusta"

Tashkent, Khimiya Prirodnnykh Soyedineniy, No. 2, 1972, pp 247-
248

Abstract: Three new alkaloids were discovered in Merendera
robusta B g e., collected in 1958. On the basis of UV and
NMR spectroscopy the compounds were identified as desacetyl-
colchicin, desacetylcolchicine and N-methylcolchamine. The
structures were verified by preparation of N-methyl and
N-acetyl derivatives.

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USSR

UDC 547.944.6

TURDIKULOV, KH., YUSUPOV, M. K., and SADIKOV, A. S., Order of Red Banner of
Labor Tashkent State University imeni V. I. Lenin

"Alkaloids of the Bulbs of Colchicum Kesselringii"

Tashkent, Khimiya Prirodykh Soyedineniy, No 4, 1971, p 541

Abstract: This study is a continuation of earlier research conducted by the
authors on the alkaloid content of Colchicum Kesselringii (Kesselring's meadow
saffron).

The phenol portion of the fraction of alkaloids of neutral-phenol character
was studied with use of thin-layer chromatography (aluminum oxide). The
presence of four substances was established: 3-demethyl- α -lumicolchicine,
2-methylcolchicine, and two other alkaloids, one with the composition
 $C_{21}H_{23}O_6N$, which appears to belong to the β -lumiderivative tropolon series.
This particular alkaloid, on the basis of the physico-chemical data obtained, may
be the same as the alkaloid S₂, separated by Canonica et al. from Gioriosa
superba L. The authors' study represents the first attempt of any sort to
separate alkaloids from Colchicum Kesselringii.

1/1

- 17 -

USSR

KISELEVA, Prof. V. I., and TURDIYEV, M., Chair of Labor Hygiene, Rostov
Medical Institute, Rostov

"The State of Carbohydrate Metabolism Under the Influences of General Vibration on the Organism"

Tashkent, Meditsinskiy Zhurnal Uzbekistana, No 12, Dec 71, pp 44-45

Abstract: The effect of vibrations with an amplitude of 0.3 mm and frequency of 25 cycles on the carbohydrate metabolism of dogs subjected to these vibrations for 1 hr/day for 90 days was studied. The vibration stand produced a noise of 70-75 db. The effects of vibrations/combined with the noise / and of noise alone of animals (I and II, respectively) by analyzing the blood of the animals. The content of sugar in the blood showed wave-like changes in group I and instability in group II. The level of lactic acid in the blood was increased in group I beginning with the 10th day of the experiment. The effect of noise alone on the level of lactic acid was approximately the same, except that the increase was less pronounced and set in only on the 60th day. The content of pyruvic acid in the blood decreased on the 70-80the day in group I, returning to normal towards the end of the experiment. Noise did not produce any changes in the content of pyruvic acid. The activity of fructoso-1, 6-phosphate aldolase showed an increase on the 15th day and on the 50-90 days
1/2

USSR

KISELEVA, B. I., and TURDIYEV, M., Meditsinskiy Zhurnal Uzbekistana, No 12,
Dec 71, pp 44-45.

in group I and II, respectively. The aldolase activity that was raised in
group I had some tendency to return to normal towards the end of the
experiment.

2/2

USSR

KISELEV, V. I., and TURDTIYEV, M.

"Some Biological Indicators of Carbohydrate Metabolism in Muscle and Liver Tissue of Dogs Under the Influence of General Vibration"

Tashkent, Meditsinskiy Zhurnal Uzbekistana, No 9, 1971, pp 45-46

Abstract: Carbohydrate metabolism in muscle and liver tissues of dogs was studied in animals subjected to vibration in an electric vibrator, (group 1) subjected to the noise of the vibration, (group 2) or controls. The first group showed increased lactic acid levels in muscle tissues and liver tissue when compared to the control group. In group two the lactic acid level of muscle tissues increased to a lesser extent, while little significant change was observed in the liver tissue. Both the first and second groups exhibited decreased glycogen levels in muscle and liver tissues. Fructose-1,6-diphosphate-alcoholase activity also increased in both groups, but to a lesser degree in the second group. Statistically significant shifts can be observed in carbohydrate metabolism when organisms are subjected to vibration and noise.

1/1

Ref# / R-760 / S-145-73

Dec. 1973

(4)

Krestenov, Kh. S., F. D. Turetskaya,
Iu. A. Chudov, and Yu. D. Shuvalev. Euler and

Lagrange methods for calculations of point
explosions in a heterogeneous atmosphere.

IN: Trudy Sektii po chislennym metodam v gazovoy

vzryva i reagirovshchih sistem. 1969. T. 3. Moscow, 1971,

85-100 (RZhMekh, 5/72, #5B28)

A study is made of a strong point explosion in a nonisotropic, thermally nonconductive gas. It is assumed that the density and pressure of the atmosphere are altitude-dependent according to an exponential law. Motion is considered in the half plane II ($r \geq 0$).

bound by the axis of symmetry. The equations of motion are written out in terms of Euler and Lagrange coordinates, motion size is written out in terms of Euler and Lagrange coordinates, motion size is written out in terms of Euler and Lagrange coordinates,

isolated in half plane II. In solving the problem, the boundary, $\Gamma_0(t)$ of the region is selected in such a manner that within the entire G_0 region, the pressure could be considered constant. The region of difference calculation, G_1 , is bounded by the curve, $\Gamma_1(t)$, the shock wave front, $\Gamma_1(t)$, and two segments of the axis of symmetry.

The solution of a number of unidimensional problems, including the problem of a point explosion in a homogeneous atmosphere with account taken of counter-pressure, was checked by an application method for its verification. Good coincidence being obtained with results of the work by

D. Ye. Okhotsimskiy, I. L. Kondratenko, Z. E. Vianov, and R. K.

RZhMekh, 1/58, #2659). Fairly good correspondence is shown in

comparison of the results of calculation of the title problem in terms of Euler and Lagrange variables.

1/2 009

UNCLASSIFIED

PROCESSING DATE--23OCT70

TITLE--POSSIBILITIES AND LIMITATIONS OF A METHOD FOR ASSAY OF NATURAL
AUXINS AND GROWTH INHIBITORS -U-

AUTHOR--(03)-KEFELI, V.I., TURETSKAYA, K.M., KOF, E.M.

COUNTRY OF INFO--USSR

SOURCE--FIZIOLOGIYA RASTENIY, 1970, VOL 17, NR 3, PP 627-634
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--PROCESSED PLANT PRODUCT, SOLVENT EXTRACTION, PLANT GROWTH
REGULATOR, CHROMATOGRAPHIC SEPARATION, PLANT PHYSIOLOGY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1998/0388

CIRC ACCESSION NO--AP0121074

UNCLASSIFIED

STEP NO--UR/0326/70/017/003/0627/0634

2/2 009

CIRC ACCESSION NO--AP0121074
ABSTRACT/EXTRACT--(U) GP-0-

UNCLASSIFIED

PROCESSING DATE--23OCT70

ABSTRACT. SOME FEATURES OF EXTRACTION OF GROWTH SUBSTANCES AND RELATED PIGMENTS FROM PLANT MATERIAL BY ETHER AND OTHER SOLVENTS ARE DISCUSSED. IT IS NOTED THAT THE EXTRACTABILITY OF IAA FROM GROUND TISSUES DEPENDS ON THE MOISTURE CONTENT OF THE SAMPLE AND ON ITS ABILITY TO COMBINE WITH POLYMER COMPOUNDS. RESTRICTIONS ARE ESTABLISHED FOR APPLICATION OF TOLUENE FOR PURIFICATION OF GROWTH SUBSTANCE EXTRACTS FROM PIGMENTS AND LIPIDS. THE VARIOUS STAGES OF ANALYSIS OF GROWTH SUBSTANCES ARE CONSIDERED. THE FIRST IS CHOICE OF CHROMATOGRAPHY; THIS PERMITS ONE WITH AID OF BIOTESTS TO DETECT THE STIMULATION AND INHIBITION ZONES AND WITH HELP OF COLOR REACTIONS TO ASSESS THEIR CHEMICAL NATURE. THE SECOND STAGE CONSISTS IN PREPARATIVE EXTRACTION OF THE MAJOR AUXINS AND INHIBITORS, THE ACCUMULATION AND RECHROMATOGRAPHY OF SEPARATE PHYSIOLOGICALLY ACTIVE COMPOUNDS. THE PREPARATIVELY EXTRACTED AND CHEMICALLY IDENTIFIED GROWTH SUBSTANCES, AUXINS AND INHIBITORS, CAN SUBSEQUENTLY BE EMPLOYED FOR FURTHER ASSESSMENT OF THEIR PHYSIOLOGICAL PROPERTIES. IN PARTICULAR TWO INDICES CAN BE CHOSEN FOR CHARACTERIZING THE SUPPRESSING ACTION OF THE GROWTH INHIBITORS. THESE ARE 1) C₅₀, THE INHIBITOR CONCENTRATION WHICH SUPPRESSES GROWTH BY 50PERCENT AND 2) CRITERIA FOR INTERACTION BETWEEN INHIBITORS AND SUB OPTIMAL PHYTOHORMONE CONCENTRATIONS: COMPLETE ANTAGONISM, PARTIAL ANTAGONISM, ABSENCE OF ANTAGONISM AND STIMULATION OF PHYTOHORMONE ACTION BY THE INHIBITOR.

FACILITY: K. A.

TIMIRIAZEZ INSTITUTE OF PLANT PHYSIOLOGY, USSR ACADEMY OF SCIENCES,
MOSCOW.

UNCLASSIFIED

1/2 C12

TITLE--ALKYL, ARYL, CHLORSILANE FORMATION DURING THE DIRECT REACTION OF
ALKYL, ARYL, CHLORIDES WITH SILICON. 7. CHLORINE TRANSFER MECHANISM IN
AUTHOR-(05)--TURETSKAYA, R.A., GOLUBTSOV, S.A., ANDRIANOV, K.A., MOSIN,
A.M., PASTUKHUV, Z.V.
COUNTRY OF INFO--USSR

UNCLASSIFIED

PROCESSING DATE--20NOV70

SOURCE--IZV. AKAU. NAUK SSSR, SER. KHM. 1970, (4), 802-8.

DATE PUBLISHED--70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--CHEMICAL SYNTHESIS, CHLORINATED ORGANIC COMPOUND, SILANE,
BENZENE DERIVATIVE, ZINC COMPOUND, CADMIUM COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3006/1305

CIRC ACCESSION NO--4P0134979

STEP NO--UR/0062/70/000/004/0802/0808

UNCLASSIFIED

2/2 012

UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0134979
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. FROM EXAMN. OF THE DIRECT
SYNTHESIS OF CHLOROSILANES OVER A CU, SI MASS, WHICH WAS EXAMD.
REPEATEDLY DURING THE REACTION FOR ITS CONTENT OF CD, CU AND ZN, IT WAS
SHOWN THAT SYNTHESIS OF PHENYLCHLOROSILANES IS DIRECTLY THE RESULT OF
FORMATION OF CUCL IN THE REACTION OF PHCL WITH CU, FOLLOWED BY REDN. BY
SE. THE CL TRANSFER TO CU, THEN TO SI, OCCURS AS A GENERAL SYMPTOM OF
DIRECT SYNTHESIS OF CHLOROSILANES IN GENERAL. PROMOTERS IN THE FORM OF
ZN OR CD OR THEIR CHLORIDES IN THE REACTION MASS APPEAR TO FUNCTION
THROUGH THE INTERMEDIATE FORMATION OF MONOCHLORIDES OF ZN AND CD AND
TRANSFER OF THE CL FROM CU TO THESE. THIS APPEARS TO BE MORE FAVORABLE
ENERGETICALLY THAN IS THE FORMATION OF CUCL FROM CU PROPER AND PHCL.
NUMEROUS KINETIC AND YIELD DATA WERE SHOWN GRAPHICALLY.

UNCLASSIFIED

1/2 013

TITLE--DEPENDENCE OF THE TECHNICAL PROPERTIES OF PORTLAND CEMENT ON ALKALI
CONTENT -U-
AUTHOR-(03)-ASTAKHOVA, M.A., TURETSKIY, A.M., SHTEIYERT, N.P.

COUNTRY OF INFO--USSR

SOURCE--TSEMENT 1970, (2), 18-19

DATE PUBLISHED--70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--CEMENT, GYPSUM, BENDING STRENGTH, COMPRESSIVE STRENGTH,
SULFATE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/1692

CIRC ACCESSION NO--APO125313

UNCLASSIFIED

STEP NO--UR/0101/70/000/002/0018/0019

2/2 013

CIRC ACCESSION NO--AP0125313

UNCLASSIFIED

PROCESSING DATE--30OCT70

ABSTRACT/EXTRACT—(U) GP-0 ABSTRACT. CLINKERS WITH HIGH ALKALI CONTENT WERE GROUND TO 3000 CM PRIME2-G. GYPSUM WITH 6000 CM PRIME2-G WAS ADDED DURING GRINDING TO ATTAIN AN SO SUB3 CONTENT OF 3.25PERCENT. AN INCREASE IN THE ALKALI CONTENT DOES NOT ADVERSELY AFFECT THE STRENGTH OF THE CEMENT. DURING BENDING AND COMPRESSION TESTS IN THE 1ST PERIODS OF HARDENING A CERTAIN STRENGTH INCREASE WAS OBSO. WITH INCREASED ALKALI CONTENT. AFTER 28PERCENT DAYS THE DIFFERENCE LEVELED OUT. THIS MAY BE DUE TO THE USE OF OIL SHALES AS FUEL, THEIR S COMPODS. FORMING SULFATES WITH THE ALKALIES. THE EFFECT OF AN ACTIVE HYDRAULIC ADDN. WAS STUDIED WITH 12 TREPEL. AUTOCLAVE EXPANSION OF CEMENTS WITH SUCH AN ADDN. IS LOWERED TO SIMLIAR TO 1-8-1-6 COMPARED WITH CEMENT WITHOUT ADDN. WITH AN ALKALI CONTENT OF 1.12-2.34PERCENT THE STRENGTH OF CEMENTS AFTER 1 YEAR IS NOT AFFECTED. WITH INCREASING ALKALI CONTENT THE AUTOCLAVE EXPANSION INCREASES NOTICEABLY. TREPEL AS ACTIVE MINERAL ADDN. DECREASES THIS EXPANSION. THE UNIFORM CHANGES IN VOL. ARE IN AGREEMENT WITH INTERNATIONAL STUS.

UNCLASSIFIED

USSR

TURETSKIY, V. YE., BERKOVSKIY, A. M., SHAPOSHNIKOV, I. N., MELIK-SARKISOV, B. S.

"High Voltage Remote Operating Ground"

UDC 621.316.99:621.315.1.3.024(088.8)
USSR Author's Certificate No 270062, Filed 12 Jul 65, Published 13 Aug 70 (from
RZh-Elekrotehnika i Energetika, No 3, Mar 71, Abstract No 3Ye154P)

Translation: A scheme is proposed for a remote operating ground executed by wires split into two equal insulated branches. A measurement and relay protect circuit is provided to insure continuous control of the state of the ground branches. An auxiliary power transformer with the secondary winding midpoint joined to the ground circuit of the substation is used in the ground unit. The ground wires are connected to the secondary winding leads of the transformer. The primary winding of the transformer is connected to the 380 volt AC network. Control of the state of repair of the ground circuit is realized with respect to the presence and magnitude of the current in the branches of the ground lines and the primary winding of the transformer. Signal relays and a balanced protection circuit are used. The unit is applied in the operating circuit of two-pole and single-pole PPT [semiconductor triode?] lines. There is 1 illustration.

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USSR

UDC 669.293.5.295.018.58

BYCHKOVA, M. I., KOZLOVA, N. D., LYSENKO, Ye. N., BARON V. V., SAVITSKIY,
Ye. M., TUREVSKIY, V. M.

"Screening Properties of Alloys in the Niobium-Titanium System"

Probl. Sverkhprovodimyashch. Materialov [Problems of Superconducting Materials --
Collection of Works], Moscow, Nauka Press, 1970, pp. 166-172. (Translated from
Referativnyy Zhurnal Metallurgiya, No. 5, 1971, Abstract No. 5 1783 by the
authors).

Translation: The distribution of the magnetic field in superconducting magnets
for quantum paramagnetic amplifiers using screening plates of Nb-Ti alloys is
studied. It is demonstrated that screens of NT-1 alloy can partially screen the
field and significantly improve its homogeneity. With a magnetic field inten-
sity of 4,000 G, a homogeneity of 10^{-3} was produced in a volume of $5 \times 8 \times 120$ mm.
5 figs; 1 table; 13 biblio refs.

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USSR

TUREVSKIY, V. M., SHUMYATSKIY, P. S.

UDC 721.375.8

"A Quantum Paramagnetic Amplifier for the Decimeter Band"

Moscow, Pribory i Tekhnika Eksperimenta, No 4, Jul/Aug 71, pp 144-146

Abstract: The paper describes a quantum paramagnetic amplifier for the 30 cm band. The reflection-type amplifier is based on a three-cavity scheme with series-connected cavities. The active medium is ruby. The gain is 13 dB with a passband of 13 MHz. A two-stage quantum paramagnetic amplifier with a gain of 23 dB and a passband of 14 MHz having an effective noise temperature of $5.7 \pm 0.4^\circ\text{K}$ is constructed on the basis of the given design. A curve is presented for the gain of the amplifier as a function of power. The device is designed for continuous operation for 18 hours.

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USSR

UDC: 537.312.62

BARON, V. V., DEMIDENKO, T. F., KLIMOV, S. I., SAVITSKIY, Ye. M., TUREVSKIY,
V. M.

"Superconducting Magnets for Quantum Paramagnetic Amplifiers"

V sb. Probl. sverkhprovodivashch. materialov (Problems of Superconducting
Materials—collection of works), Moscow, "Nauka", 1970, pp 209-215 (from
RZh-Radiotekhnika, No 5, May 71, Abstract No 5D550)

Translation: On the basis of the operating principle and parameters of the paramagnetic crystals of quantum paramagnetic amplifiers, the authors give a basis for the requirements to be satisfied by the characteristics of superconducting magnets and solenoids. The results of development and experimental verification of superconducting magnets and solenoids with winding of copper-plated and insulated grade RNS wire and shields of NT-1 alloy and compound are presented together with their design peculiarities. Types of superconducting magnets and sectionalized solenoids are created in the developmental process. Two illustrations, bibliography of four titles.

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USSR

UDC: 537.312.62

BYCHKOVA, M. I., KOZLOVA, N. D., LYSENKO, Ye. N., BARON, V. V., SAVITSKIY,
Ye. M., TUREVSKIY, V. M.

"Shielding Properties of Alloys in the Niobium-Titanium System"

V sb. Probl. sverkhprovodvashch. materialov (Problems of Superconducting
Materials--collection of works), Moscow, "Nauka", 1970, pp 166-172 (from
RZh-Radiotekhnika, No 5, May 71, Abstract No 5D569)

Translation: The authors study the distribution of the magnetic field in
superconducting magnets for quantum paramagnetic amplifiers with the use of
shielding plates made from niobium-titanium alloy. It is shown that shields
of NT-1 alloy can partially screen the field and appreciably improve field
homogeneity. At a magnetic field strength of 4,000 oersteds, a uniformity
of 10^{-3} is obtained in a volume of $5 \times 8 \times 120$ mm. Five illustrations, one
table, bibliography of thirteen titles. Resumé.

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USSR

UDC 537.312.62:538

BARON, V. V., DEMIDENKO, T. F., KLIMOV, S. I., SAVITSKIY, Ye. M., and
TUREVSKIY, V. M.

"Superconducting Magnets for Quantum Paramagnetic Amplifiers"

Problemy Sverkhprovodimykh Materialov [Problems of Superconducting
Materials — Collection of Works], Moscow, Nauka Press, 1970, pp 209-215

Translation: Based on the operating principle and parameters of paramagnetic
crystals in quantum paramagnetic amplifiers, the requirements placed on
characteristics of superconducting magnets and solenoids are explained.

Results are presented from the development and experimental testing of
superconducting magnets and solenoids with windings of copper and type RNS
insulated wire and shields of NI-1 alloy and compounds, as well as their
design features.

Types of superconducting magnets and sectioned solenoids were created
in the process of development.
2 figures, 4 biblio. refs.

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USSR

UDC 537.312.62:669.293

BYCHKOVA, M. I., KOZLOVA, N. D., LYSENKO, Ye. N., BARON, V. V., SAVITSKIY,
Ye, M., and TUREVSKIY, V. M.

"Screening Properties of Alloys in the Niobium-Titanium System"

Problemy Sverkhprovodimykh Materialov [Problems of Superconducting
Materials -- Collection of Works], Moscow, Nauka Press, 1970, pp 166-172

Translation: The distribution of the magnetic field in superconducting magnets
was studied for quantum paramagnetic amplifiers using screening plates of niobium-
titanium alloy. It was shown that shields of NT-1 alloy can partially screen
a field and significantly improve its homogeneity. With a magnetic field in-
tensity of 4,000 oe, a homogeneity of 10^{-3} was produced in a volume of
5 x 8 x 120 mm.

5 figures, 1 table, 13 bibli. refs.

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USSR

UDC 612.275.1

MUSTAFIN, K. S., YERMACHKOVA, N. N., and TURGUNBAYEV, K., Chair of Faculty
Therapy, Kirgiz State Medical Institute, Division of Pathomorphology, Institute
of Experimental Morphology imeni A. I. Natishvili, Academy of Sciences Georgian
SSR, and Oshskaya Oblast' Hospital

"Morphological Manifestations of Heart Hypertrophy at a High Altitude"
Frunze, Sovetskoye Zdravookhraneniye Kirgizii, No 2, Mar/Apr 71, pp 37-40

Abstract: Morphological changes in the heart of guinea pigs kept for periods
of 3-90 days at an elevation of 3,200 m above sea level were studied. On the
3d to 15th day structural and histochemical changes developed in the myocardium
that were associated with hypertrophy of the tissue. These changes leading to an over-
panied by formation of necrotic sections. Necrotic changes leading to an over-
development of connective tissues reached a maximum on the 15th day and decreased
towards the 30th day. The content of glycogen and ribonucleoproteins in the
myocardium increased. While under normal conditions the content of glycogen
and ribonucleoproteins in the right ventricle is much lower than in the left,
adaptation to high altitude resulted in an increase of the content of the sum
of these substances in the right ventricle, so that it sometimes was greater
than in the left. The hypertrophy of the myocardium was most pronounced in the
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USSR

MUSTAFIN, K. S., et al., Sovetskaya Zdravookhraneniye Kirgizii, No 2, Mar/Apr
71, pp 37-40

right ventricle. The morphological changes observed in the myocardium tissue were essentially the same on the 90th as on the 45-60 th days, except that they were somewhat less pronounced in the later stage. While sojourn at the high altitude produced initial damage to the myocardium, this damage gradually decreased after the 15th day. The changes observed indicated adaptation of myocardial function to the hypoxia associated with the high altitude, but this adaptation was incomplete, because some damage to tissue remained even on the 90th day.

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I/2 012

TITLE—ELASTIC, PIEZOELECTRIC, AND DIELECTRIC PROPERTIES OF BARIUM
TITANATE SINGLE CRYSTALS WITH LAMINAR DOMAIN STRUCTURE -U-

AUTHOR—TURIK, A.V.

COUNTRY OF INFO--USSR

SOURCE—FIZ. TVRD. TELA 1970, 12(3), 892-9

DATE PUBLISHED-----70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--SINGLE CRYSTAL PROPERTY, CRYSTAL STRUCTURE, BARIUM TITANATE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1988/0252

CIRC ACCESSION NO--AP0105326

UNCLASSIFIED

STEP NO--UR/0181/70/012/003/0892/0899

2/2 012

CIRC ACCESSION NO--AP0105326 UNCLASSIFIED

PROCESSING DATE--11SEP70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A BATIO SUB3 SINGLE CRYSTAL HAS
CONSIDERED, WITH REGULAR STRUCTURE CONSISTING OF ALTERNATING LAYERS OF
"HEAD TO TAIL" DOMAINS SEPD. BY 90DEGREES WALLS. RELATIVE TO THE AV.
VALUES OF THE ELECTROSTATIC FIELD, INDUCTION, MECH. STRESSES, AND
DEFORMATIONS, SUCH SINGLE CRYSTALS WITH THE SAME CONCNS. OF DIFFERENTLY
ORIENTED DOMAINS CAN BE DESCRIBED BY TENSORS OF THE CONSTS. OF BENDING,
DIELEC. CONSTS., AND PIEZOMODULI OF THE RHOMBIC SYMMETRY. A GENERAL
METHOD IS PROPOSED FOR THE CALCN. AND FORMULAS ARE OBTAINED FOR DETN.
OF THE PHYS. CONSTS. OF THE SINGLE CRYSTAL WITH THE 90DEGREES LAMINAR
STRUCTURE, FROM THE KNOWN VALUES OF THE CONSTS. OF 1 DOMAIN TETRAGONAL
CRYSTALS. EFFECTS WERE INVESTIGATED OF MECH. "COMPRESSION" AND PARTIAL
"RELEASE" DEDT. BY THE PRESENCE IN THE CRYSTAL OF 90DEGREES DOMAIN
WALLS. THESE EFFECTS CONSIST OF THE FACT THAT AN ELEC. FIELD APPLIED
DURING MEASUREMENT OF SOME COMPONENTS OF DIELEC. CONSTS. CAUSES THE
APPEARANCE IN SEP. DOMAINS OF MECH. STRESSES (DEFORMATIONS), ALTHOUGH ON
THE AV., STRESSES (DEFORMATIONS) IN THE CRYSTAL ARE ABSENT. QUAL.

UNCLASSIFIED

USSR

UDC 519.2

TURIN, V. YA.

"Integral Representation of Sums containing Binomial Coefficients"

V sb. Perevod diskretn. soobshch. po kanalam s gruppiruyushchimisya oshibkami
(Transmission of Discrete Messages over Channels with Grouped Errors -- collection of works), Moscow, Nauka Press, 1972, pp 139-142 (from RZh-Kibernetika, No 7, Jul 72, Abstract No 7V6)

Translation: A representation of a binomial coefficient in the form of a contour integral of a function of a complex variable is obtained. This representation is used for summation of certain expressions containing binomial coefficients. The methods and their generalizations proposed in the paper permit replacement of the sums by the contour integrals which can be calculated using the methods of the theory of functions of a complex variable. The integral representation of the sums in many cases is convenient to use to find the asymptotic estimates obtained by the known methods, for example, the method of steepest descent.

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USSR

TURIN, V. YA.

UDC 577.4

"Comparison of Two Schemes for Constructing an Error Source Model"

V sb. Perevoda diskret. soobshch. po kanalam s gruppiruyushchimisya oshibkami
(Transmission of Digital Messages over Channels with Grouped Errors — collection
of works), Moscow, Nauka Press, 1972, pp 74-77 (from RZh-Kibernetika, No
7, Jul 72, Abstract No 7V442)

Translation: A comparison was made between two schemes for constructing an error source model. According to one of these schemes, the statistics of the errors occurring during transmission of digital information over a standard telephone channel is described by a Markov function; according to the other scheme, the description of the statistics is based on recovery processes with a finite recovery time. Conditions are found under which both of the investigated schemes coincide. The matrix of the transition probabilities was found for the model based on recovery processes when the lengths of the packets and the spaces are subject to quasigeometric distributions.

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USSR

TURINA, G. A., TURIN, V. Ya.

UDC: 51:621.391

"Calculation of the Distribution of Probabilities of the Number of Errors
in a Block by the Monte-Carlo Method"

V sb. Peredacha diskretn. soobshch. po kanalam s gruppirovushchimisya oshib-
kami (Transmission of Discrete Messages Over Channels With Grouped Errors--
collection of works), Moscow, "Nauka", 1972, pp 101-104 (from RZh-Kibernetika,
No 6, Jun 72, Abstract No 5V339)

Translation: The paper deals with the question of the feasibility of using
the Monte-Carlo method for computer calculation of the probabilities that a
block of given length N will contain t errors. The results of computer
modeling of the error source are analyzed. The results of calculations of
the distribution of probabilities of different numbers of errors in a block
of given length obtained by computer modeling are compared with experi-
mental data on errors which arise in transmission of binary information
through a standard telephone channel. Authors' abstract.

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USSR

TURIN, V. Ya.

UDC: 51:621.391

"Calculation of the Probability of Different Numbers of Errors in a Block
of Given Length"

V sb. Peredacha diskretn. soobshch. po kanalam s gruppirovushchimisya oshib-
kami (Transmission of Discrete Messages Over Channels With Grouped Errors--
collection of works), Moscow, "Nauka", 1972, pp 94-101 (from RZh-Kibernetika,
No 6, Jun 72, Abstract No 6V338)

Translation: The probabilities of different numbers of errors in a block of given length are calculated in accordance with a model based on recovery processes with finite recovery time, assuming that errors arise not only in periods of failure, but also in periods of no-failure operation. The calculation is done with the aid of binary generating functions. A special case is considered where the model is approximated by a process with instantaneous recovery. Integral representations of probabilities are derived and used to find asymptotic estimates. Author's abstract.

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USSR

POPOV, O. V., TURIN, V. Ya.

UDC: 51:621.391

"Estimate of the Distribution of Probabilities of the Numbers of Sub-Blocks
With Errors in a Block of Given Length"

V sb. Peredacha diskretn. soobshch. po kanalam s gruppiruyushchimisa oshib-
kami (Transmission of Discrete Messages Over Channels With Grouped Errors--
collection of works), Moscow, "Nauka", 1972, pp 104-113 (from RZh-Kibernetika,
No 6, Jun 72, Abstract No 6V340)

Translation: An estimate is made of the distribution of probabilities $P(T)$
that T sub-blocks of length $n_1 = n/N$ in a block of length n will contain at
least one error on the basis of a model which reflects the statistical
principles governing the appearance of errors in transmission of binary
symbols through standard telephone channels.

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USSR

UDC: 51:621.391

TURINA, G. A. and TURIN, V. Ya.

"Computing the Probability Distribution of the Number of Errors in a Block by the Monte Carlo Method"

Moscow, v sb. Peredacha diskretn. soobshch. po kanalam s gruppi-ruyushchimisa oshibkami (Discrete Information Transmission Along Channels With Grouped Errors--collection of works) 1972, "Nauka," pp 101-104 (from RZh--Matematika, No 6, 1972, Abstract No 6V339)

Translation: The possibility of using the Monte Carlo method for computing, with the help of an electronic computer, the probability that a block of specified length N contains t errors is investigated. The results of error source modeling are analyzed with the use of the electronic computer. Results of calculations of the probability distribution of various numbers of errors in a block of given length, obtained by machine modeling, are compared with the experimental data of errors arising in the transmission of binary information over a standard telephone channel. Authors' abstract

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USSR

UDC: 51:621.391

TURIN, V. Ya.

"Computing the Probability of Various Numbers of Errors in a Block
of Specified Length"

Moscow, v sb. Peredacha diskretn. soobshch. po kanalam s gruppi-
tuyushchimisa oshibkami (Discrete Information Transmission Along
Channels With Grouped Errors--collection of works) 1972, "Nauka,"
pp 94-101 (from RZh--Matematika, No 6, 1972, Abstract No 6V338)

Translation: A computation is made of the probabilities of various numbers of errors in a block of specified length according to a model based on restoration processes with finite restoration time, under the assumption that the error occurs not only in the breakdown period but in faultless operation periods as well. The computation is made through the use of binary generating functions. The particular case in which the model is approximated by a process with instantaneous restoration is considered. The probability integrals are obtained and are used to find asymptotic estimates.
Author's abstract

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USSR

UDC: 51:621.391

POPOV, O. V. and TURIN, V. Ya.

"Estimating the Probability Distribution of a Number of Subblocks With Errors in a Block of Specified Length"

Moscow, v sb. Perekada diskretn. soobshch. po kanalam s gruppi-ruyushchimisya oshibkami (Discrete Information Transmission Along Channels With Grouped Errors--collection of works) 1972, "Nauka," pp 104-113 (from RZh--Matematika, No 6, 1972, Abstract No 6V540)

Translation: Using a model representing the statistical expressions of the occurrence of errors in the transmission of binary symbols over a standard telephone channel, the authors estimate the probability distribution $P(T)$ that a block of length n contains T subblocks of length $n_1 = n/N$ in which there is at least one error. Authors' abstract

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USSR

TURIN, V. Ya.

UDC: 577.4

"Comparison of Two Systems for Constructing Error Source Models"

Moscow, V sb. Peredacha diskret. soobshch. po kanalam s gruppi-
ruyushimisya oshibkami (Transmission of Discrete Information Along
Channels With Grouped Errors--collection of works) "Nauka," 1972,
pp 74-77 (from RZh--Matematika, No 7, 1972, Abstract No 7V442)

Translation: A comparison is made of two systems for constructing error source models. According to one of them, the statistics of errors arising in the transmission of discrete information along standard telephone channels is described by the Markov function; according to the other, the statistical description is based on restoration processes with finite restoration time. Conditions are found for which both these systems coincide. The author derives a matrix of the transitional probabilities for models based on restoration processes in which the length of the blocks and intervals are subject to quasi-geometric distributions. Author's abstract.

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USSR

UDC: 8.74

TURINA, G. A."A Generator Which Simulates a Source of Errors"

V eb. Peredacha diskretn. soobstich. po kanalim s gruppiruyushchimisya oshib-
kami (Transmission of Discrete Messages Over Channels With Grouped Errors--
collection of works), Moscow, "Nauka", 1972, pp 113-116 (from RZh-Kibernetika,
No 6, Jun 72, Abstract No 6v498).

Translation: The paper deals with the problem of realizing a model of an error source. The question is studied by computer on the basis of recovery processes with finite recovery time. A description is given of modeling of error bursts and the spaces between adjacent bursts. A block diagram of the model is given. Methods are proposed for analyzing the results of computer modeling of error sources. Author's abstract.

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USSR

TURINA, G. A., TURIN, V. Ya.

UDC: 51:621.391

"Calculation of the Distribution of Probabilities of the Number of Errors
in a Block by the Monte-Carlo Method"

V sb. Peredacha diskretn. soobshch. po kanalem s gruppiruyushchimisya oshib-
kami (Transmission of Discrete Messages Over Channels With Grouped Errors--
collection of works), Moscow, "Nauka", 1972, pp 101-104 (from RZh-Kibernetika,
No 6, Jun 72, Abstract No 6V339)

Translation: The paper deals with the question of the feasibility of using
the Monte-Carlo method for computer calculation of the probabilities that a
block of given length N will contain t errors. The results of computer
modeling of the error source are analyzed. The results of calculations of
the distribution of probabilities of different numbers of errors in a block
of given length obtained by computer modeling are compared with experi-
mental data on errors which arise in transmission of binary information
through a standard telephone channel. Authors' abstract.

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USSR

UDC: 51:621.391

TURINA, G. A. and TURIN, V. Ya.

"Computing the Probability Distribution of the Number of Errors in a Block by the Monte Carlo Method"

Moscow, v sb. Perekadcha diskretn. soobshch. po kanalam s gruppi-ruyushchimisya oshibkami (Discrete Information Transmission Along Channels With Grouped Errors--collection of works) 1972, "Nauka," pp 101-104 (from RZh--Matematika, No 6, 1972, Abstract No 6V339)

Translation: The possibility of using the Monte Carlo method for computing, with the help of an electronic computer, the probability that a block of specified length N contains t errors is investigated. The results of error source modeling are analyzed with the use of the electronic computer. Results of calculations of the probability distribution of various numbers of errors in a block of given length, obtained by machine modeling, are compared with the experimental data of errors arising in the transmission of binary information over a standard telephone channel. Authors'

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1/2 026

UNCLASSIFIED

PROCESSING DATE--13NOV70

TITLE--THEORETICAL PRINCIPLES AND NATIONAL ECONOMY EFFECTIVENESS OF THE
INTENSIFICATION OF METALLURGICAL PROCESSES BY OXYGEN -U-

AUTHOR--TURKEBAYEV, E.A.

COUNTRY OF INFO--USSR

SOURCE--(TEORETICHESKIYE OSNOVY I NARODNOKHOZYAYSTVENNAYA EFFEKTIVNOST'
INTENSIFIKATSII METALLURGICHESKIKH PROTSESSOV KISLORODOM) ALMA-ATA,
DATE PUBLISHED----70

SUBJECT AREAS--MATERIALS, MECH., IND., CIVIL AND MARINE ENGR, BEHAVIORAL
AND SOCIAL SCIENCES

TOPIC TAGS--METALLURGIC PROCESS, OXYGEN, ECONOMICS, FERROUS METAL,
MONOGRAPH, BIBLIOGRAPHY, METAL OXYGEN CONVERSION, METALLURGIC FURNACE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1995/0318

STEP NO--UR/0000/70/000/000/0001/0323

CIRC ACCESSION NO--AM0116007

UNCLASSIFIED

2/2 026 UNCLASSIFIED PROCESSING DATE--13NOV70
CIRC ACCESSION NO--AM0116007

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. TABLE OF CONTENTS: INTRODUCTION
3. CHAPTER I THEORETICAL PRINCIPLES OF OXYGEN INTENSIFICATION OF
METALLURGICAL PROCESSES 8. II TECHNOLOGICAL CHARACTERISTICS OF
OXYGEN INTENSIFICATION OF METALLURGICAL CONVERSIONS 142. III ECONOMIC
ASPECTS OF NATIONAL ECONOMY EFFECTIVENESS OF OXYGEN INTENSIFICATION OF
METALLURGICAL PROCESSES 252. CONCLUSION 295. BIBLIOGRAPHY 306.
APPENDIX 317. THE MONOGRAPH CONTAINS EXTENSIVE GENERALIZED DATA OF
THEORETICAL, TECHNOLOGICAL AND ECONOMIC INVESTIGATIONS OF VARIOUS
METHODS FOR INTENSIFICATION OF MELTING BY MEANS OF OXYGEN, MAINLY IN
APPLICATION TO FERROUS METALLURGY. THE BOOK WAS WRITTEN FOR A WIDE
CIRCLE OF SPECIALISTS IN GENERAL HEAT POWER ENGINEERING, FUEL POWER
ENGINEERING, METALLURGY, AS WELL AS INDUSTRIAL WORKERS, PROFESSORS AND
STUDENTS OF UNIVERSITIES AND TECHNICUMS.

UNCLASSIFIED

1/2 015

UNCLASSIFIED

PROCESSING DATE--11SEP70

TITLE--CRYSTAL STRUCTURE OF POTASSIUM ALUMINUM ETHYLENEDIAMINETETRAACETATE DIHYDRATE -U-

AUTHOR--POLYNOVA, T.N., BELSKAYA, N.P., MARTYNENKO, I.I.,
~~TURKDEGARCIABANUS, D.~~, PORAKOSHITS, M.A.

COUNTRY OF INFO--USSR

SOURCE--ZH. STRUKT. KHM. 1970, 11(1), 164-5

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--CRYSTAL STRUCTURE, COMPLEX COMPOUND, POTASSIUM COMPLEX,
ALUMINUM COMPLEX, X RAY STUDY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1987/0445

STEP NO--UR/0192/70/011/001/0164/0165

CIRC ACCESSION NO--AP0104058

UNCLASSIFIED

2/2 015

UNCLASSIFIED

PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0104058

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE STRUCTURE OF THE TITLE COMPO., KA1EDTA.2H SUB2 O, WAS DETD. BY SINGLE CRYSTAL X RAY METHODS. THE ORTHORHOMBIC LATTICE PARAMETERS ARE A 22.89, B 10.18, AND C 6.53 ANGSTROM; Z EQUAL 4; AND THE SPACE GROUP IS P2 SUB 1 2 SUB1 2 SUB1. THE COMPO. IS ISOSTRUCTURAL WITH NH SUB4 COEDTA.2H SUB2 O AND RBCOEDTA.2H 2 N ATOMS FROM THE EDTA ION (AL-O EQUAL 1.92-2.01 ANGSTROM, AL-N EQUAL 2.03-2.04 ANGSTROM). THE H SUB2 O MOLES. ARE NOT COORDINATED. MARY FRANCES RICHARDSON.

UNCLASSIFIED

USSR

UDC:669.184.244.66

TURKENICH, D. I., ZIN'KO, B. F., and ROMANOV, YU. A.

"Influence of Blow Parameters on Reaction Rate of Decarburization in a Converter"

Proizvodstvo Chernykh Metallov [Production of Ferrous Metals--Collection of Works], No 75, Metallurgiya Press, 1970, pp 108-116

Translation: The influence of oxygen consumption and position of the tuyere on the rate of oxidation of carbon and degree of assimilation of oxygen by the decarburization reaction in the converter are studied. The established experimental dependences cannot be explained using the criteria based on the gas dynamic similarity of the velocity fields.

An attempt is made to explain these phenomena using the peculiarities of mass transfer of oxygen in the converter bath. 7 figures; 12 bibli. refs.

1/1

- 19 -

1/2 011

UNCLASSIFIED

PROCESSING DATE--18SEP70

TITLE--SYNTHESIS OF RHODANINE DERIVATIVES WITH POSSIBLE ANTIMETABOLITE
ACTIVITY. IX. ESTERS OF 3,(ALPHA-GAMMA,DICARBOXY)-QROPYLPHODANINE AND
AUTHOR--TURKEVICH, B.M.

COUNTRY OF INFO--USSR

SOURCE--Khim. Geterotsikl. Soedin. 1970, (2), 285

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY, BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--HETEROCYCLIC SULFUR COMPOUND, CARBOXYLIC ACID ESTER,
CONDENSATION REACTION, UV SPECTRUM, ANTIMETABOLITE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1987/1107

STEP NO--UR/0409/70/000/002/0285/0285

CIRC ACCESSION NO--AP0104505

UNCLASSIFIED

2/2 011

UNCLASSIFIED

PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0104505
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ESTERS (I) OF
2,(3,RHODANYL)GLUTARIC ACID II WERE PREPD. IN 77.1-95.5PERCENT YIELDS.
II, ET, PR, BU AND ISOAMYL ESTERS DISTD. AT 0.2-0.4 MM WITHOUT DECOMPN.,
ME ESTER M. 52-3DEGREES, BENZYL ESTER M. 39-41DEGREES. CONDENSATION OF
I WITH BZH AND ISATIN IN NH SUB4 BUFFER YIELDED 70.2-91PERCENT
5,SUBSTITUTED DERIVS. CHARACTERIZED BY 4 ABSORPTION MAX. IN UV SPECTRUM.

UNCLASSIFIED

1/2 009

UNCLASSIFIED

PROCESSING DATE--16OCT70

TITLE--REACTIONS OF TRITHIOBARBITURIC ACID -U-

AUTHOR-(102)-TURKEVICH, N.M., VVEDENSKIY, V.M.

COUNTRY OF INFO--USSR

SOURCE--DOPOV. AKAD. NAUK Ukr. RSR, SER. 8 1970, 32(1), 60-2

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--BARBITURATE, ORGANIC SULFUR COMPOUND, CHEMICAL SYNTHESIS,
MOLECULAR STRUCTURE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1989/1565

STEP NO--UR/0442/70/032/001/0060/0062

CIRC ACCESSION NO--AT0107985

UNCLASSIFIED

2/2 009

UNCLASSIFIED

PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AT0107985

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. EFFECT OF S ATOMS SUBSTITUTED FOR O IN BARBITURIC ACID ON REACTIVITY WAS STUDIED. TRITHIOPARBITURIC ACID (I) WAS PREPD. (86PERCENT) BY MIXING 0.05 MOLE BARBITURIC ACID WITH 40 G P SUB2 S SUB5, THEN WITH 400 ML DIOXANE, AND REFLUXING THE MIXT. 4 HR; I PPTD. ON COOLING OVERNIGHT. DERIVS. OF I PREPD. (II) INCLUDED THIOSEMICARBAZONES AND THIRZOLIDINYHYDRAZONES. CONDENSATION OF I WITH 2,HYDROXY,1, NAPHTHALDEHYDE WAS ACCOMPAINED BY A SIMULTANEOUS DEHYDRATION TO YIELD II. THE ACTIVITY OF RESP. POSITIONS OF I WERE HIGHER THAN THOSE IN BARBITURIC ACID.

INST., LVOV, USSR. FACILITY: LIVIV. MED.

UNCLASSIFIED

USSR

UDC 547.26'118

VATAMANYUK, N. M., TURKEVICH, V. V., GRITSAY, N. I., and VAS'KOV, A. P.,
Lvov Forestry Technology Institute and Lvov State University Imeni Ivan
Franko

"Selenothiophosphoric Acid Esters. VI. Alkylthiomethyl Esters of
0,0-Diphenylselenothiophosphoric Acid"

Leningrad, Zhurnal Obshchey Khimii, Vol 43 (105), No 8, Aug 73, pp 1713-1715

Abstract: The reaction of the potassium salt of 0,0-diphenylselenothiophosphoric acid with α -chloromethylallylthioesters goes in two directions, forming a mixture of thione and thiol isomers.

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USSR

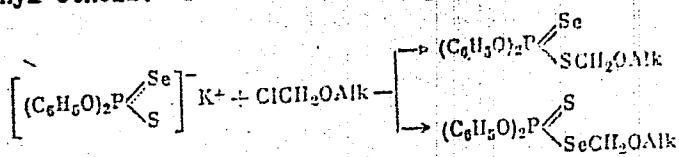
UDC 547.26'118

VATAMANYUK, N. M., TURKEVICH, V. V., and VAS'KIV, A. P., L'vov Forestry-Engineering Institute

"Esters of Selenothiophosphoric Acid. V. Alkoxymethyl Esters of 0,0-Diphenylselenothiophosphoric Acid."

Leningrad, Zhurnal Obshchey Khimii, Vol 41, No 8, Aug 71, pp 1693-1695

Abstract: Continuing the study of the chemical properties of 0,0-dialkyl-(aryl)selenothiophosphoric acids, the authors investigated the reaction of the potassium salt of 0,0-diphenylselenothiophosphoric acid with some chloromethyl ethers. The reaction can proceed in two ways:



Chromatography and IR spectra indicate the presence of a thion and a thiol isomer.

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- 40 -

USSR

UDC 547.26'118

ZEMLYANSKIY, N. I., VIL'DANOVA, G. G., GRITSAY, N. I., TURKEVICH,
V. V., Lvov State University imeni Ivan Franko, Lvov, Ministry of
Higher and Secondary Specialized Education Ukrainian SSR

"Reactions of O,O-Diphenyldithiophosphoric Acid Salts With
Diazonium Salts"

Leningrad, Zhurnal Obshchey Khimii, Vol 40, No 9, Sep 70,
pp 1976-1978

Abstract: It is reported that the potassium salt of O,O-diphenyldithiophosphoric acid reacts with aryl diazonium salts in aqueous medium to yield orange and red colored solid products. They decompose slowly on standing and faster in acetone solution when heated. Heated in dry state they explode. For example, to obtain O,O-diphenyl-S-p-nitrophenyldiazonium dithiophosphate, potassium O,O-diphenyldithiophosphate dissolved in water was added to a diazonium salt solution prepared from nitroaniline, concentrated HCl, and sodium nitrite in an acetate buffer solution. The reaction mixture was kept at pH 7-8. The precipitated product was washed 1/2.

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USSR

ZEMLYANSKIY, N. I., et al, Zhurnal Obshchey Khimii, Vol 40, No 9,
Sep 70, pp 1976-1978

and dried; its m.p. is 50° (decomposes). Diazonium solution based
on p-aminobenzoic acid reacted with potassium O,O-diphenyldithiophos-
phate gave O,O-diphenyl-S-p-carboxyphenyldiazonium dithiophos-
phate, temp. of decomposition 81°. Analogously, O,O-diphenyl-S-o-
carboxyphenyldiazonium dithiophosphate and its meta analogue were
obtained.

2/2

USSR

UDC: 547.26'118

ZEMLYANSKIY, N. I., MEL'NIK, Ya. I., TURKEVICH, V. V., L'vov State University
imeni Ivan Franko

"Unsaturated Esters of Dithiophosphoric Acid. VIII. Addition of Dialkyl-
dithiophosphoric Acids to Their S-Propargyl Esters"

Leningrad, Zhurnal Obshchey Khimii, Vol 42(104), No 6, Jun 72, pp 1269-1273

Abstract: The authors studied addition reactions of dialkyl-dithiophosphoric acids with their S-propargyl esters. The reactions were carried out in the presence of benzoyl peroxide or sodium alkoxide. It was found that in both cases the addition reaction takes place with the formation of a single product -- 1,2-bis(0,0'-dialkylthiophosphato)-2-propene -- in accordance with Markovnikov's rule. The adduct ratio was 1:1 in all instances.

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USSR

UDC 537.533.2+537.534

SMOLIN, YU. Z., TURKEVICH, YU. G.

"Emission From an Antimony-Cesium Cathode Under the Action of Laser Radiation on Glass With Nd"

Tr. Leningr. politekhn. in-ta (Works of Leningrad Polytechnical Institute, 1970, No 311, pp 56-58 (from RZh-Fizika, No 12(I), Dec 70, Abstract No 12Zh644)

Translation: It was observed that the dependence of the emission photocurrent (I) on radiation intensity (P) obeys the law $I \sim P^\alpha$, where $\alpha = 1.6-2.2$. The authors propose that this dependence may be associated either with two-photon absorption or with stepwise absorption through the admixture level with a small lifetime. A. Zh.

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*SSR

UDC 621.671: 621.187.13.001.5

TURKIN, A. N., CHEGURKO, V. E.

"Tests of a Stand-by PE-600-300 Electric Feed Pump"

Chelyabinsk, V sb. "Osvoyeniye blokov moshchnosr'yu 300 MВt na Ekibastuzsk. ugle" (Collection of Works-Assimilation of 300 Mw Power Units Burning the Ekibastuz-Region Coal), 1972, pp 115-121 (from Referativnyy Zhurnal-Teploenergetika, No 6, June 72, Abstract № 6 C 75).

Abstract: Pump efficiency was found to be 0.728 during industrial tests. Low hydraulic efficiency (0.86) of working components, widening of the diffusor channel of the guiding apparatus, which is due to blades trimming and the enlargement of clearances in packings of the flow - through section are the causes of low economy of the pump. Thermal regime of the case and discharge cover of the PE-600-300 feed pump is unfavorable for functioning of

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USSR

TURKIN, A. N. and CHEGURKO, V. E., Chelyabinsk, v. sb., 1972, pp 115-121
packings, due to the occurrence of appreciable temperature differences
between the "top" and "bottom," resulting in possible grazing in packings at
start. At nominal slip of 3%, the efficiency of hydraulic coupling is being
0.95. 2 figures, 1 table, 2 references.

CSO: 1861-W

- END -

2/2

- 130 -

USSR

UDC 621.317.799:537.511.35

PASHAYEV, A.M., TURKIN, I.N., BAKSHIYEV, I.I., GUSEYNOV, G.D.

"Devices For Investigation Of The Conductivity Of Heavily Doped Semiconductors"

Sa tekhn. progress (For Technical Progress), 1970, No 6, pp 5-8 (from RZh-Elektronika i yeye prizneniye, No 11, November 1970, Abstract No 11B437)

Translation: A device is described for a noncontact method of measurement of electrical conductivity, which is based on measurement of the losses in an oscillatory circuit during introduction of a specimen. The device is intended for checking of semiconductor disks [shayba] and ingots under production conditions. The generator feeding the sensor [datchik] circuit with a HF current is assembled using one transistor. By virtue of the elimination of a d-c amplifier and regulators of the anode and filament power supply from the device, a simple portable unit is created. The voltage at the indicator is supplied from a rectifier diode loosely coupled with the circuit; the compensation voltage is supplied from a highly-stable standard cell. Checking of the resistivity is accomplished in the range of 10^{-2} - 10 ohm.cm. Reproducibility of the results is better than 1% [sic]. The reliability and stability of operation of the device were checked by tests with prolonged uninterrupted operation (from 50 to 150 hours). 3 ref. I.R.

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USSR

UDC: 534-8

TURKIN, N. G.

"Interaction of Normal Waves in Ultrasonic Strip Waveguides"

Leningrad, Tr. Leningr. in-t aviats. priborostr. (Works. Leningrad Institute of Aviation Instrument Building), 1972, vyp. 76, pp 89-92 (from RZh-Fizika, No 5, May 73, abstract No 5Zh613 [résumé])

Translation: In an ideal elastic waveguide, propagated normal waves are independent. In real media, interaction of normal waves arises, leading to excitation of other types of waves during propagation of the main wave. In studies done on excitation of Lamb waves in polycrystalline materials two forms of interaction of normal waves were observed: with equality of both the phase and group velocities of the interacting normal waves, and with inequality of these velocities. The first form of interaction leads only to a gradual dip on the amplitude-frequency response of the waveguide, while the second form produces a sharp dip and a considerable, spurious signal.

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USSR

UDC: 531.441.3

MIKHAYLICHENKO, A. A., TURKIN, V. E., FISHMAN, I. S., Institute of Nuclear Physics, Academy of Sciences of the USSR, Novosibirsk

"A Multichannel Analyzer of Rapidly Alternating Frequencies"

Moscow, Pribory i Tekhnika Eksperimenta, No 3, May/Jun '72, pp 115-118

Abstract: When studying coherent phase instability in accelerators, it is necessary to observe the amplitudes of a rapidly alternating spectrum. The rf voltage applied to the accelerating gap when coherent oscillations arise is modulated by the voltage induced by the beam current. Thus side frequencies appear in the spectrum of the induced voltage across the pickup electrodes. The side frequencies differ from the corresponding harmonics of the rotational frequency by the frequency Ω of small phase oscillations:

$$\Omega' = \omega_0^2 \frac{qeKV \sin \varphi}{2\pi E_s(t)},$$

where ω_0 is the rotational frequency, q , φ , V are the multiplicity, equilibrium phase and amplitude of the accelerating voltage, and $E_s(t)$ is the energy of an equilibrium particle. This paper describes a three-channel

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USSR

MIKHAYLICHENKO, A. A., et al., Pribory i Tekhnika Eksperimenta, No 3,
May/Jun 72, pp 115-118

receiver for tracking the side frequencies of coherent phase oscillations $\omega_0 \pm \Omega$, $2\omega_0 - \Omega$ in the B-4 synchrotron. Each channel is a superhet receiver with sweep-driven self-tuning heterodynes. The signal from the pickup or probe is sent by 75-ohm cable through a matched coupler to attenuators which expand the dynamic range of input amplitudes to 60 dB. The signal from the attenuator output is sent to preselectors. The preselectors isolate bands of 36.7-37, 37.5-37.8 and 74-74.3 MHz respectively with a selectivity of about 30 dB. From the preselectors, the signals go to mixers. Here they are mixed with signals from the sweep-driven heterodynes. The heterodyne frequencies vary in accordance with a law given by the controlling voltage proportional to the driving magnetic field. The frequency tuning bands of the heterodynes are equal to the deviation of the side frequencies being studied. A block diagram, schematic and photograph of the receiver are given. The authors thank N. S. Dikanskiy for constructive criticism.

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1/2 044

UNCLASSIFIED

PROCESSING DATE--27NOV70

TITLE--SPECTRAL ANALYSIS OF POWDERED SAMPLES IN A FLAME BY USING A
SCINTILLATION METHOD OF RECORDING -U-

AUTHOR--(02)-PANICHEV, N.A., TURKIN, YU.I.

COUNTRY OF INFO--USSR

SOURCE--ZH. PRIKL. SPEKTROSK. 1970, 12(2) 213-16

DATE PUBLISHED----70

SUBJECT AREAS--CHEMISTRY, MATERIALS

TOPIC TAGS--FLAME PHOTOMETRY, SCINTILLATION COUNTER, LITHIUM, CESIUM,
STRONTIUM, GALLIUM, METAL POWDER/(U)ISP51 SPECTROGRAPH

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3001/2091

CIRC ACCESSION NO--AP0127464

STEP NO--UR/0368/70/012/002/0213/0216

UNCLASSIFIED

2/2 044

UNCLASSIFIED

PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0127464
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A SCINTILLATION METHOD OF RECORDING IN AIR, C SUB2 H SUB2 FLAME IS USED FOR POWD. SAMPLES FOR DIRECT SEQUENTIAL DETNS. OF LI, CS, SR, AND GA. SAMPLES OF 3, 10, 25, AND 44 MU M PARTICLE SIZE WERE MIXED WITH CORRESPONDING SiO SUB2 PARTICLES AND THE SPECTRA WERE MEASURED WITH A ISP 51 SPECTROGRAPH. THE FOLLOWING ANAL. LINES AND SENSITIVITIES WERE MEASURED: LI 6707.8, 10 PRIME NEGATIVE6, CS 4555.4, 10 PRIME NEGATIVE4, SR 4507.3, 10 PRIME NEGATIVE4, AND GA 4172.8 ANGSTROM, 5 TIMES 10 PRIME NEGATIVE5PERCENT. RELATIVE STD. DERIVATION FOR THESE CONCNS. WAS 30PERCENT (FOR 50 DETNS.); BUT INCREASING CONCNS. TO 0.01PERCENT LOWERED IT TO THE 6-8PERCENT RANGE. THE RESULTS OBTAINED BY USING THE SPECTRAL METHOD CORRESPONDED QUITE WELL WITH THOSE OBTAINED BY FLAME PHOTOMETRY. BY THIS METHOD PRODUCTIVITY CAN BE GREATLY INCREASED.

UNCLASSIFIED

USSR

UDC 669.295.018.9(088.8)

TURKINA, A. N., ODOYEVSKIY, L. S., KHAZANOVA, T. P., KARSANOV, G. V.,
ANOSHKIN, N. F., TSISTYAKOV, Ye. P., PAVLOV, A. G., TRUBIN, A. N., and
TETYUKHIN, V. V.

"Master Alloy for Production of High-Strength Titanium Alloys"

USSR Author's Certificate No 309061, filed 15/07/69, published 20/09/71
(Translated from Referativnyy Zhurnal Metallurgiya, No 3, 1972, Abstract
No 3G159P by G. Svodtseva)

Translation: A master alloy for the production of high-strength Ti alloys, containing Mo, V, and Al. To increase the quality of the ingots produced, the alloy includes Cr and Fe with the following relationships of components (in %): Mo 32-34, V 32-34, Al 18-22, Cr 6-8, Fe 5-7. The master alloy can be produced either by direct smelting of the metals in an open induction furnace or by an aluminothermal method in a furnace.

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Mechanical Properties

USSR

UDC 669.715'74'884:539.43

KADANER, E. S., TURKINA, N. I.

"Mechanical Properties and High-Temperature Strength of Individual Phases of Alloys of the Al-Mn-Li System"

V sb. Struktura i svoystva legk. splavov (Structure and Properties of Light Alloys — collection of works), Moscow, Nauka Press, 1971, pp 95-101 (from RZh-Metallurgiya, No 4, Apr 72, Abstract No 41636)

Translation: A study was made of the mechanical properties of alloys of various phases of the domains of the Al-Mn-Li system and also the high-temperature strength of individual phases present in these alloys. The mechanical properties were determined in pressed alloys worked with respect to the optimal heat treatment conditions, the methods of short-term stretching at room and increased temperatures, and also stress-rupture strength (lasting 100 hours). It was established that the best properties are observed for Al alloy with 1.5% Mn and 2.8-3.8% Li at a quenching temperature of 590° in the two-phase domain of $\alpha + \text{MnAl}_6$. The indicated alloys have low strength properties at room temperature and are characterized by relatively high stability of the properties on heating to 200° with prolonged holding. The high-temperature strength of the phases was studied by the method of short-term and prolonged (one-hour) microhardness in the 20-300° range. The MnAl_6 phases and the solid solution of Li based on this

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USSR

KADANER, E. S., et al., Struktura i svoystva legk. splavov, Moscow, Nauka Press, 1971, pp 95-101.

compound can be classified as heat-resistant phases with respect to absolute values of the microhardness and nature of the temperature dependence. The role of the alloying elements in work hardening and stress-relief of the Al-Mn-Li alloys has been discovered. Five illustrations, 1 table, and a 14-entry bibliography.

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USSR

KADANER, E. S., TURKINA, N. I.

"Mechanical Properties and Heat Resistance of Individual Phases of Alloys
in the System Al-Mn-Li"

Struktura i Svoystva Legk. Splavov [Structure and Properties of Light
Alloys -- Collection of Works], Moscow, Nauka Press, 1971, pp 95-101,
(Translated from Referativnyy Zhurnal, Mekhanika, No 4, 1972, Abstract
No 4 V1341 by the author's).

Translation: The mechanical properties of alloys of various phase areas
in the system Al-Mn-Li are studied, as well as the heat resistance of the
individual phases present in these alloys. The mechanical properties were
determined on pressed alloys treated according to the optimal mode of heat
treatment by methods of short term extension at room and elevated tempera-
tures, as well as long term (100 hour) strength. It was found that the
best properties are produced in alloys of aluminum with 1.5% manganese and
2.8-3.8% lithium. These alloys have low strength properties at room tem-
perature and high stability of properties when heated to 200° upon long
holding. The heat resistance of the phases was studied by brief and extended
(1 hour) microhardness testing in the 20-300° temperature interval. The
phases $MnAl_6$ and the solid solution of lithium based on this compound are
 $1/2$

USSR

KADANER, E. S., TURKINA, N. I., *Struktura i Svoystva Legk. Splavov*, Moscow,
Nauka Press, 1971, pp 95-101.

heat-resistant phases, on the bases of absolute values of microhardness and
its temperature dependence. 14 Biblio. Refs.

2/2

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Computers: Equipment

USSR

UDC: 658.562.012.7

KHITROVSKIY, Ye. I., TURKINA, T. I., LEBEDEV, L. I., MURAV'IEV, V. A.

"A Device for Gathering and Processing Statistical Data"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki,
No 31, 1970, Soviet Patent No 283689, Class 42, filed 20 May 69, p 139

Abstract: This Author's Certificate introduces a device for gathering and processing statistical data on the course of a technological process. The device contains a buffer memory and units for normalizing, comparison, storage, control and synchronization, program setting, program processing, signaling, display, and registration. As a distinguishing feature of the patent, the effectiveness of analysis is improved and the technological process is simplified by connecting the output of the comparison unit to the input of the program setting unit, and connecting one input of the signaling unit to the output of the program processing unit, while the other input is connected to the output of the program setting unit.

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USSR

UDC 537.226.33:534.286

POSTNIKOV, V. S., KAVERIN, L. D., PAVLOV, V. S., and TURKOV, S. K.

"Internal Friction in Single Crystals of Lithium Niobate at Hertz Frequencies"

Moscow, Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya, Vol 35, No 9,
Sep 71, pp 1918-1920

Abstract: The authors cite the results of investigating low-frequency internal friction and shift modulus of monocrystalline LiNbO_3 in the temperature range of $4.2\text{-}400^\circ \text{K}$. They found two relaxation peaks at temperatures of 300°K (peak A) and 130°K (peak B) on the temperature curve of the internal friction of polydomain samples. The A peak does not exist in the monodomain samples. The activation energy of peaks A and B is 0.7 and 0.14 eV respectively. The authors conclude that peak B is the result of point defects generated in the annealing process. Peak A is explained by the interaction of point defects with 180° -domain boundaries. The experimental results agree quite well with the theoretical ones. The authors use three graphs to illustrate their findings. The article contains 3 illustrations and 5 bibliographic entries.

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1/2 034

UNCLASSIFIED

PROCESSING DATE--30OCT70
FERRITES -U-

AUTHOR-(03)-DONETS, A.M., POSTNIKOV, V.S., TURKOV, S.K.

COUNTRY OF INFO--USSR

SOURCE--FIZ. KHM. OBRAB. MATER. 1970, (2), 114-20

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY, MATERIALS

TOPIC TAGS--INTERNAL FRICTION, MANGANESE COMPOUND, ZINC, FERRITE, METAL
HEAT TREATMENT, CRYSTAL ORIENTATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1998/0944

CIRC ACCESSION NO--AP0121546

STEP NO--UR/0472/70/000/002/0114/0120

UNCLASSIFIED

2/2 034

CIRC ACCESSION NO--AP0121546

UNCLASSIFIED

PROCESSING DATE--30OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EFFECT OF HEAT TREATMENT WAS STUDIED ON THE INTERNAL FRICTION OF MN-ZN FERRITES AT 300-600DEGREES. THE TEMP. CURVES HAVE A RELAXATION MAX. NEAR 500DEGREES AT A FREQUENCY OF 7-9 HZ. THE HEIGHT OF THE MAX. DEPENDS ON THE COMPN. OF THE FERRITES AND ON THE HEAT TREATMENT. MN PRIME3 POSITIVE AND CATION VACANCIES MAY BE RESPONSIBLE FOR THE MAX. THE RELAXATION PROCESS IS CONSIDERED TO BE THE RESULT OF THE REORIENTATION OF MN PRIME3 POSITIVE-VACANCY PAIRS IN THE OCTAHEDRAL POSITIONS. THE INTERNAL FRICTION DUE TO SUCH A MECHANISM WAS CALCD., AND IT WAS FOUND THAT THE RELAXATION TIME, FOR THE REORIENTATION OF THE ION VACANCY PAIRS, DEPENDS ON THE ORIENTATION OF THE CRYSTAL AND THE NATURE OF THE STRESSED STATE.

UNCLASSIFIED

USSR

UDC 621.375.82

MIKAELYAN, A. L., ANIKINA, Ye. B., MINAYEV, V. P., TURKOV, Yu. G.
"Single-Mode Ruby Laser With Ring Resonator"

V sb. Kvant. elektronika (Quantum Electronics -- Collection of Works), No. 1,
Moscow, 1971, pp 136-139 (from RZh-Fizika, No 7, Jul 71, Abstract No 7D1043)

Translation: A single-mode ruby ring laser operating in a free generation mode
was investigated. The laser was used to record holograms on "Mikrat-VR" film and
on thin metal films. Authors abstract.

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USSR

UDC: 621.373:530.145.6

MIKAELYAN, A. L., ANIKINA, Ye. B., MINAYEV, V. P., TURKOV, Yu. G.

"A Single-Mode Ruby Laser With Ring Cavity"

V sb. Kvant. elektronika (Quantum Electronics--collection of works), No 1,
Moscow, 1971, pp 136-139 (from RZh-Radiotekhnika, No 5, May 71, Abstract
No 5D183)

Translation: The paper presents the results of a study of a single-mode ruby ring laser which operates in the free emission mode. The laser is used for recording holograms on "Mikrat-VR" film and thin metal films. Four illustrations, bibliography of six titles. Resumé.

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USSR

UDC: 621.373:530.145.6

MIKAELYAN, A. L., KUPRISHOV, V. F., TURKOV, Yu. G., ANDREYEV, Yu. V.,
SHCHERBAKOVA, A. A.

"Investigation of Emission From a Ruby Laser With Automatic Q-Switching"

V sb. Kvant. elektronika (Quantum Electronics--collection of works), No 1,
Moscow, 1971, pp 102-109 (from RZh-Radiotekhnika, No 5, May 71, Abstract
No 5D182)

Translation: The paper presents the results of a study of the effects of
giant pulse emission in a ruby laser which does not contain special switching
elements. Automatic Q-switching is achieved by using unstable configurations
of the optical cavity. Seven illustrations, bibliography of five titles.
Resumé.

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I/2 032

UNCLASSIFIED

PROCESSING DATE--20NOV70

TITLE--A NEW METHOD FOR THE GENERATION OF A GIANT PULSE IN LASERS -U-

AUTHOR--(05)-MIKAELYAN, A.L., KUPRIISHOV, V.F., TURKOV, YU.G., ANDREYEV,
YU.V., SHCHERBAKOVA, A.A.

COUNTRY OF INFO--USSR

SOURCE--ROSCEW, PIS'MA V ZHURNAL EKSPERIMENTAL'NOY I TEORETICHESKOY
FIZIKI, VOL 11, NO 5, 5 MAR 70, PP 244-246

DATE PUBLISHED--70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--GIANT PULSED LASER, RUBY LASER, REFRACTIVE INDEX

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1999/1721

CIRC ACCESSION NO--AP0123528

STEP NO--UR/0385/70/011/005/0244/0246

UNCLASSIFIED

2/2 032

UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0123528
ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. THE ARTICLE DESCRIBES A NEW METHOD FOR THE GENERATION OF GIANT PULSES IN A RUBY LASER WHICH DOES NOT INVOLVE THE INTRODUCTION OF ADDITIONAL MODULATING ELEMENTS INTO THE CAVITY. THE OSCILLATOR DESIGN WAS DESCRIBED IN AN EARLIER ARTICLE BY THE AUTHORS. A RUBY CRYSTAL WITH SAPPHIRE ENDPIECES 7 MM IN DIAMETER AND 120 MM LONG (TOTAL CRYSTAL LENGTH 157 MM) WAS USED. EXCITATION WAS EFFECTED BY MEANS OF AN IFP-1200 FLASHLAMP. THE CAVITY CONSISTED OF A FULLY REFLECTING SPHERICAL MIRROR. THE GENERATION MODE OF THE LASER DEPENDS ESSENTIALLY ON THE LENGTH OF THE CAVITY. WITH LENGTH VALUES CORRESPONDING TO THE STABILITY REGION OF THE CAVITY ORDINARY FREE GENERATION TAKES PLACE, ACCCOMPANIED BY SPIKES. AN INCREASE IN VALUES OF THE GENERATION, AND GIANT PULSE RADIATION IS OBSERVED ALONG WITH THE FREE GENERATION SPIKES. IT IS SUGGESTED THAT THE MECHANISM INVOLVED IN THE OBSERVED PHENOMENA IS DUE TO A CHANGE IN THE COURSE OF THE BEAMS IN THE CAVITY AS A RESULT OF CHANGES IN THE REFRACTIVE INDEX OF THE RUBY CROSS SECTION ACCORDING TO THE FIELD IN THE CAVITY. IT IS NOTED THAT THE PRINCIPLE OF GIANT PULSE GENERATION BEING CONSIDERED DOES NOT NOT DEPEND ON THE RADIATION WAVELENGTH AND APPARENTLY CAN BE USED FOR NEODYMIUM GLASS AND OTHER ACTIVE MEDIA WHICH GENERATE IN THE IR RANGE.

FACILITY: MOSCOW SCIENTIFIC RESEARCH INSTITUTE OF INSTRUMENT BUILDING.

UNCLASSIFIED

1/2 039

UNCLASSIFIED

PROCESSING DATE--23OCT70

TITLE--COHERENT SUPERPOSITION OF THE EMISSION FIELDS OF SINGLE FREQUENCY
RUBY LASERS -U-

AUTHOR--(03)-MIKAYELIAN, A.L., MINAYEV, V.P., TURKOV, YU.G.

COUNTRY OF INFO--USSR

SOURCE--AKADEMIIA NAUK SSSR, DOKLADY; VOL. 191, MAR. 21, 1970, P. 565-567

DATE PUBLISHED--21MAR70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--RUBY LASER, LASER EMISSION COHERENCE, LASER RADIATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1998/0712

CIRC ACCESSION NO--AT0121371

STEP NO--UR/0020/70/191/000/0565/0567

UNCLASSIFIED

2/2 039

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--ATO121371

ABSTRACT/EXTRACT--[U1 GP-0-

ABSTRACT. DESCRIPTION OF EXPERIMENTS IN WHICH THE COHERENT SUPERPOSITION OF SINGLE FREQUENCY RADIATION FIELDS WAS PERFORMED IN TWO Q MODULATED COUPLED RUBY LASERS HAVING SIMILAR RESONATOR LENGTHS, THRESHOLD PUMPING LEVELS AND OTHER PARAMETERS. THE RADIATION COHERENCE ENHANCEMENT ACHIEVED BY THIS TECHNIQUE IS DISCUSSED.

UNCLASSIFIED

USSR

MIKHAELYAN, A. L., KUPRISHOV, V. F., TURKOV, YU. G., ANDREYEV, YU. V.,
and SHCHERBAKOVA, A. A., Moscow Scientific Research Institute of In-
strument Building

"A New Method for the Generation of a Giant Pulse in Lasers"

Moscow, Pis'ma v Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki,
Vol 11, No 5, 5 Mar 70, pp 244-246

Abstract: The article describes a new method for the generation of giant pulses in a ruby laser which does not involve the introduction of additional modulating elements into the cavity. The oscillator design was described in an earlier article by the authors. A ruby crystal with sapphire endpieces 7 mm in diameter and 120 mm long (total crystal length 157 mm) was used. Excitation was effected by means of an IFP-1200 flashlamp. The cavity consisted of a fully reflecting spherical mirror. The generation mode of the laser depends essentially on the length of the cavity. With length values corresponding to the stability region of the cavity ordinary free generation takes

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USSR

MIKAELEYAN, A. L., et al., Pis'ma v Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, Vol 11, No 5, 5 Mar 70, pp 244-246

place, accompanied by spikes. An increase in values corresponding to the region of cavity instability changes the character of the generation, and giant pulse radiation is observed along with the free-generation spikes. It is suggested that the mechanism involved in the observed phenomena is due to a change in the course of the beams in the cavity as a result of changes in the refractive index of the ruby cross section according to the field in the cavity. It is noted that the principle of giant pulse generation being considered does not depend on the radiation wavelength and apparently can be used for neodymium glass and other active media which generate in the IR range.

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USSR

UDC 543.42

PANICHEV, N. A., PRUDNIKOV, Ye. D., TURKIN, Yu. I., SHVEDOVA, I. V.

"Scintillation Method of Recording in the Atom Absorption Method of Spectral Analysis"

Minsk, Zhurnal Prikladnoy Spektroskopii, Vol XVIII, No 5, 1973, pp 772-776

Abstract: The scintillation method of recording in the atom absorption technique for spectral analysis is based on recording the absorption pulses of the analytical line caused by evaporation in an atomizing source of individual particles the composition of which includes a defined element. In the example of analyzing Zn, Cd, Cu, Pb, He, and Au the possibility of direct analysis of these elements in powdered samples by blowing them into an air-acetylene flame in an oxygen stream with a relative sensitivity of 10^{-5} to 10^{-6} % is demonstrated. A study was made of the effect of the number of particles containing the defined element on the efficiency of the scintillation recording. The method is highly promising for evaluating the form of the concentration distribution of the elements in the sample composition and analysis of an object with a nonuniform concentration (rocks, industrial aerosols). A block diagram of the experimental device and the tabulated experimental data are presented.

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USSR

PANICHEV, N. A., et al., Zhurnal Prikladnoy Spektroskopii, Vol XVIII, No 5,
1973, pp 772-776

A comparison of the detection limits of the scintillation method of recording
in the emission and atom absorption methods of analysis performed for Cu and
Ag also showed that the latter is more sensitive. The result is explained
by the higher level of spectral noise for measuring emission radiation by
comparison with the number of nonselective absorption pulses.

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L/2 024
TITLE--SYNTHESIS AND STRUCTURE OF ADDUCTS OF ETHOXYSILANECARBYLICARBENE WITH
CIS, AND TRANS, 1,3, FENYLICARBYNE -U-
AUTHOR-(04)-LISHANSKIY, I.S., POMERANTSEV, V.I., TURKOVA, L.D.,
KHACHATUROV, A.S.
COUNTRY OF INFO--USSR

SOURCE--ZH. ORG. KHM. 1970, 6(5), 918023
DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--CHEMICAL SYNTHESIS, MALEIC ANHYDRIDE, IR SPECTRUM, NUCLEAR
MAGNETIC RESONANCE, ISOMER, EPOXY COMPOUND, CYCLOPROPANE, AMINE
DERIVATIVE, ALKYNE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3006/1336

CIRC ACCESSION NO--APOL35010

STEP NO--UR/0366/70/0067005/0918/0923

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